Lab Assignment

Cybersecurity Professional Program

Introduction to Python
for Security

Functions

PY-05-L8
Car Creation

Lab Objective

Understand object-oriented programming (OOP) and how to create classes in Python.

Lab Mission

Implement object-oriented programming concepts by creating a class with attributes and objects.

Lab Duration

20–30 minutes

Requirements

- Basic knowledge of Python

Resources

- Environment & Tools
    - Windows, Linux, and macOS
        - PyCharm
        - Python 3

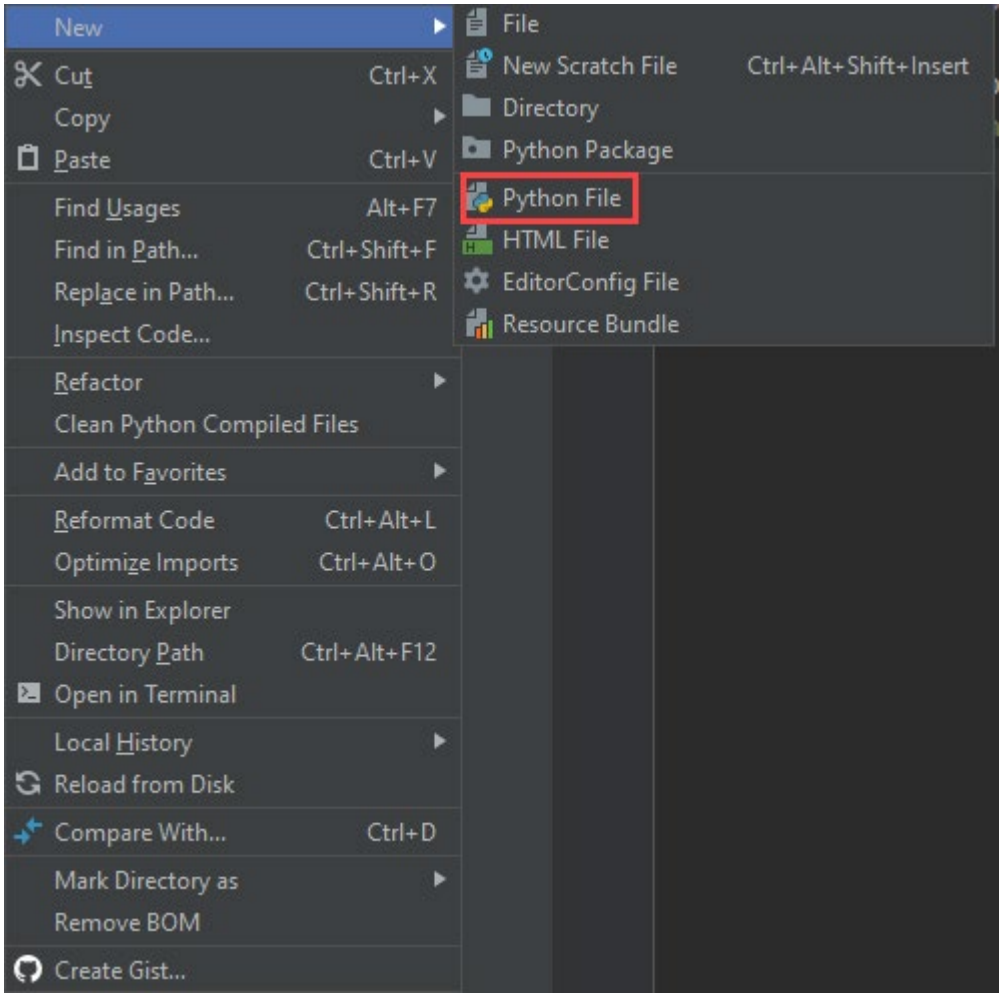
Textbook References

- Chapter 5: Functions
    - Section 3: Object-Oriented Programming

Lab Task: Creating a Car Class in Python

Practice the implementation of object-oriented programming by creating a class and its attributes.

1. Create a new Python file in PyCharm by right clicking the project you created and selecting **New** > ***Python File***.



2. Create a new class named ***Car***.

```
class Car:
```

3 Define the initialization method of the class, which should include the parameters: ***self***, ***color***, ***windows_number***, and ***price***.

```
def __init__(self, color, windows_number, price):
```

4 In the method, assign the data passed by the parameters to the ***self*** variable.

```
def __init__(self, color, windows_number, price):
    self.color = color
    self.windows_number = windows_number
    self.price = price
```

5 Outside the class, create a new class object and pass the required parameters to it.

```
car1 = Car("Red", 4, 100000)
```

6 Create another object of the ***Car*** class.

```
car2 = Car("Blue", 2, 300500)
```

7 Print the color of the first ***Car*** object.

```
print(car1.color)
```

8 Print the price of the second ***Car*** object.

```
print(car2.price)
```